

## Mixing device

## Abstract

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A device comprising a shaft (1), a front ring (2), which is non-positively and positively connected to this shaft, an end ring (3), which is non-positively and positively connected to the shaft at a distance A from the front ring, and a loose mixing  
10 ring (4), which is freely rotatable and located between the front ring and the end ring, wherein

the front ring and the end ring in each case have at least one channel (2k) or (3k), respectively, which runs axially parallel,  
15 at an angle in relation to the axis of the shaft or helically, and has in each case at least two regions (2b<sub>1</sub> and 2b<sub>2</sub>) or (3b<sub>1</sub> and 3b<sub>2</sub>) of different outside diameters, of which the region with the smaller outside diameter (2b<sub>2</sub>) or (3b<sub>2</sub>) is respectively located on the side facing the mixing ring, and

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the mixing ring has a first region (4b<sub>1</sub>) in which its inside diameter is large enough for it to be able to overlap with the region of smaller diameter of the front ring (2b<sub>2</sub>), has an adjoining region (4b<sub>2</sub>) in which the mixing ring has on its inner  
25 side at least one channel (4k) which runs axially parallel, at an angle in relation to the axis of the shaft or helically thereto, and also an adjoining third region (4b<sub>3</sub>), in which its inside diameter is large enough for it to be able to overlap with the region of smaller diameter of the end ring (3b<sub>2</sub>) and the mixing  
30 ring is so long that, in its respective end positions, the other of the two rings (2) or (3) respectively is partially overlapped by the mixing ring.

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